IN THE SPECIFICATION

Page 1, insert before the first line, the following paragraph:

This application is a divisional of application number 09/171,937 filed on April 28, 1999, which is a 371 of PCT/EP97/02497 filed May 2, 1997, which designated the U.S., claims the benefit thereof and incorporates the same by references.

Please replace the third paragraph on page 6, which starts "Figure 3. Lineup of plant derived" with the following:

~~Figure 3.~~ Figures 3A and 3B. Lineup of plant derived TPS encoding sequences compared with the TPS_{yeast} sequence using the Wisconsin GCG sequence analysis package (Devereux et al. (1984) A comprehensive set of sequence analysis programs of the VAX. Nucl. Acids Res., 12, 387).

Please replace the fifth paragraph on page 8, which starts "Figure 19. Reduced and enhanced" " with the following:

Figure 19. ~~Reduced~~ Scanned images showing reduced and enhanced bolting in transgenic lettuce lines expressing PC-TPS or PC-TPP compared to wild-type plants. The lower panel shows leaf morphology and ~~colour~~ color.

Please replace the sixth paragraph on page 8, which starts "Figure 3. "Figure 20. Profile of soluble" with the following:

~~Figure 20.~~ Figures 20 A-D Profile of soluble sugars ~~(Fig. 20/1)~~ Figs. 20A and B) in extracts of transgenic lettuce (upper panel) and transgenic beet (lower panel)

lines. In the upper panel controls are GUS-transgenic lines which are compared to lines transgenics for PC-TPS and PC-TPP. In the lower panel all transgenic are PC-TPS. Starch profiles are depicted in ~~Fig. 20/2.~~ Figs. 20B and C.

Please replace the first paragraph on page 9, which starts "Figure 21. Plant and leaf " with the following:

Figure 21. ~~Plant~~ Scanned image showing plant and leaf morphology of transgenic sugarbeet lines expressing PC-TPS (TPS) or PC-TPP (TPP) compared to wild-type plants (Control). TPS A-type has leaves which are comparable to wild-type while TPS D-type has clearly smaller leaves. The leaves of the TPP transgenic line have a lighter green ~~colour~~ color, a larger petiole and an increased size compared to the control.

Please replace the eighth paragraph on page 9, which starts "Figure 28. Tuber yield " with the following:

~~Figure 28.~~ Figures 28 A-C. Tuber yield of pMOG1129 (845-11/22/28) transgenic potato lines.

Please replace the ninth paragraph on page 9, which starts "Figure 29. Cross section" with the following:

~~Figure 29.~~ Figures 29 A-B. ~~Cross~~ Scanned images showing cross section through leaves of TPP ~~(lower panel)~~ (Fig. 29B) and TPS ~~(upper panel)~~ (Fig. 29A) transgenic tobacco plants. Additional cell layers and increased cell size are visible in the TPS cross section.

Please replace the second paragraph on page 10, which starts "Figure 31. Leaf morphonlogy " with the following:

Figure 31. ~~Leaf~~ Scanned images showing leaf morphology, ~~colour~~ color and size of tobacco lines transgenic for 35S TPS (upper leaf), wild-type (middle leaf) and transgenic for 35S TPP (bottom leaf).

Please replace the third paragraph on page 10, which starts "Figure 32. Metabolic profiling" with the following:

~~Figure 32.~~ Figures 32 A-D. Metabolic profiling of 35S TPS (pMOG799), 35S TPP (pMOG1010), wild-type (WT), PC-TPS (pMOG1177) and PC-TPP (pMOG1124) transgenic tobacco lines. Shown are the levels of trehalose, soluble sugars ~~(Figure 32-1)~~ (Figs. 32A and B), starch and chlorophyll ~~(Figure 32-2)~~ Figs. 32C and D).

Please replace the sixth paragraph on page 10, which starts "Figure 35. Yield of " with the following:

~~Figure 35.~~ Figures 35 A-E. Yield of pMOG1028 (pat as-trehalase) and pMOG1028(845-11/22/28) (pat as-trehalase pat TPS) transgenic potato lines in comparison to wild-type potato lines.

Please replace the seventh paragraph on page 10, which starts "Figure 36. Yield of " with the following:

Figure 36. Yield of pMOG1092 (PC as-trehalase) transgenic potato lines in comparison to wild-type potato lines as depicted in ~~Fig. 35.~~ Figs. 35 A-E.

Please replace the last paragraph on page 10, which starts "Figure 37. Yield of" with the following:

Figure 37. Yield of pMOG1130 (PC as-trehalase PC TPS) transgenic potato lines in comparison to wild-type potato lines as depicted in ~~Fig. 35.~~ Figs. 35 A-E.

Please replace the second paragraph on page 47, which starts "Plants transgenic " with the following:

Plants transgenic for pMOG1010 (35S-TPP) and pMOG1124 (PC-TPP) were analyzed on carbohydrates, chlorophyll, trehalose and starch ~~(Fig. 32).~~ (Figs. 32 A-D). For chlorophyll data see also Table 6a.

Please replace the last paragraph on page 48, which starts "One TPS gene " with the following:

One TPS gene fragment was isolated from *Helianthus annuus* (sunflower) using primer combination TPSdeg 2/5 in a PCR amplification with genomic DNA of *H. annuus* as a template. Sequence and Southern blot analysis confirmed the homology with the TPS genes from *E.coli*, yeast and *Selaginella*. Comparison of these sequences with EST sequences (expressed sequence tags) from various organisms, see Table 6b and SEQ ID NOS 45-53 and 41, indicated the presence of highly homologous genes in rice and `Arabidopsis`, which supports our invention that most plants contain TPS homologous genes ~~(Fig. 3).~~ (Figs. 3A and 3B).

Please replace the first paragraph on page 62, which starts "The morphology" with the following:

The morphology of the leaves, and most prominent the leaf-edges, was clearly affected by the expression of TPS and TPP. Leaves transgenic for PC-TPS were far more "notched" than the PC-TPP transgenic leaves that had a more smooth and round morphology (Fig. 19).Leaf extracts of transgenic lettuce lines were analyzed for sugars and starch ~~(Fig. 20)~~. (Figs. 20 A-D).

Please replace the second paragraph on page 62, which starts "Constructs used in sugarbeet " with the following:

Constructs used in sugarbeet transformation experiments: PC-TPS and PC-TPP. Transformation frequencies obtained with both the TPS and the TPP construct were comparable to controls. The phenotypes of both TPS and TPP transgenic plants were clearly distinguishable from wild-type controls; TPS transgenic plants had thick, dark-green leaves and TPP transgenic plants had light-green coloured leaves with slightly taller petioles when compared to wild-type plants (Fig. 21). Taproot diameter was determined for all plants after ca. 8 weeks of growth in the greenhouse. Some PC-TPS transgenic lines having a leaf size similar to the control plants showed a significant larger diameter of the tap-root (Fig. 22). PC-TPP transgenic lines formed a smaller taproot compared to the non-transgenic controls. Leaf extracts of transgenic sugarbeet lines were analyzed for sugars and starch ~~(Fig. 20)~~. (Figs. 20 A-D).

Please replace the paragraph bridging pages 63 and 64, which starts "Contruct PC TPS Pat TBS: " with the following:

Construct: PC TPS Pat TPS; pMOG1129(845-11/22/28)

Plants expressing PC TPS and Pat-TPS simultaneously were generated by

retransforming Pat-TPS lines (resistant against kanamycin) with construct pMOG1129, harbouring a PC TPS construct and a hygromycin resistance marker gene, resulting in genotypes pMOG1129(845-11), pMOG1129(845-22) and pMOG1129(845-28). Tuber-mass yield varied between almost no yield up to yield comparable or higher then control plants ~~(Fig. 28).~~ (Figs. 28 A-C).

Please replace the second paragraph on page 66, which starts "Influence of TPS and TPP" with the following:

*Influence of TPS and TPP expression on leaf morphology*Segments of greenhouse grown PC-TPS transgenic, PC-TPP transgenic and non-transgenic control tobacco leaves were fixed, embedded in plastic and coupes were prepared to study cell structures using light-microscopy. Cell structures and morphology of cross-sections of the PC-TPP transgenic plants were comparable to those observed in control plants. Cross-sections of PC-TPS transgenics revealed that the spongy parenchyme cell-layer constituted of 7 layers of cells compared to 3 layers in wild-type and TPP transgenic plants ~~(Fig. 29)~~ Figs. 29 A and B. This finding agrees with our observation that TPS transgenic plant lines form thicker and more rigid leaves compared to TPP and control plants.

Please replace the paragraph bridging pages 74 and 75, which starts "Contructs Pat as-trehalase " with the following:

Constructs: Pat as-trehalase (pMOG1028) and Pat as-trehalase Pat TPS (pMOG1028(845-11/22/28))

Plants expressing Pat as-trehalase and Pat-TPS simultaneously were generated

by retransforming Pat-TPS lines (resistant against kanamycin) with construct pMOG1028, harbouring the Pat as-trehalase construct and a hygromycin resistance marker gene, resulting in genotypes pMOG1028(845-11), pMOG1028(845-22) and pMOG1028(845-28). Plants were grown in the greenhouse and tuber yield was determined ~~(Fig. 35)~~ (Figs. 35 A-E). A number of pMOG1028 transgenic lines yielded significantly more tuber-mass compared to control lines. Individual plants transgenic for both Pat TPS and Pat as-trehalase revealed a varying tuber-yield from almost no yield up to a yield comparable to or higher then the control-lines ~~(Fig. 35)~~ (Figs. 35 A-E).

Pages 78 - 140, delete in entirety and replace with the Sequence Listing attached hereto.